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KOWI Koordinierungsstelle EG der Wissenschaftsorganisationen

Best Insights into European R&D Funding from Brussels

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Guest Contribution

# Complementarity of National and European Research Funding

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Dr. Beate Konze-Thomas

The Seventh Framework Programme for Research and Development opens up attractive opportunities for German universities to obtain additional third-party funding from Brussels. The scientific competition at the European level and the Commission's intention to move towards full-cost funding – an additional incentive that Germany's University Pact also aims to provide to some extent – pose challenges. National funding schemes, such as "Research Units", "Priority Programmes", "Collaborative Research Centres" or "Clusters of Excellence", can serve as focal points that stimulate European networking and attract substantial European funding. The same applies to the support of young researchers: national graduate programmes and graduate schools serve as a good basis for the formation of European Graduate Schools, the new Marie Curie networks in the People programme. Collaborating with leading international scientists and other European partners has positive knock-on effects for the international visibility of both the individual scientist and his or her institution.

The European Research Council will fund basic research by individual teams – young scientists first of all, followed by experienced researchers as well. This will give individual scientists in particular a further opportunity to apply for third-party funding in Europe. The ERC starting grant will allow universities to bring in outstanding young researchers. Successful candidates will mainly establish themselves at an existing institute, collaborative research centre or cluster of excellence. In some areas of science, the presence of prominent researchers who have secured national funding through, for example, individual schemes, is also sufficient to attract young researchers. Universities must ensure they create attractive conditions so that excellent, ERC-funded research teams will establish themselves there.

Top scientists at German research institutions will be successful in the second funding strand of the ERC, as they will draw on their considerable experience of stringent competition.

Experience shows that DFG funding mechanisms can be seen as completely complementary to European research funding. They draw on national major scientific achievements and are an ideal starting point for new cross-border European collaborations, if this adds value.

This is even more relevant with regard to the ERC, which will place particular emphasis on support for basic research. Each is inconceivable without the other!

Editorial

# Dear reader,

One key question has emerged from discussions with university administrators and scientists over the past few months: how can we make optimal use of our national funding structures in order to beat off the competition in FP7?

Not only will the Framework 7 budget rise by around 40 per cent, but there is also more money in the pot for young scientists and basic research – making participation, particularly by universities, an attractive option. However, universities would be well advised to examine where they are outstanding enough to fend of the competition in FP7: a weak national performance will hardly bowl Europe over.

Thus, each university needs to identify its individual top-rate scientific achievements. This is also the case for research areas in which more structured support for young scientists will be available in the future. From individual scientists to clusters of excellence, there is a lot on offer. We are therefore happy to support German universities in their plans to be more proactive in targeting capable individual scientists in order to prepare them for successful participation in FP7.

This translation of our regular publication gives you a brief insight of our daily work. By showing you best-practice examples from German researchers and research projects either complemented by EU-funding or suitable for it, we wish to depict how a smart combination of national and European research funding can work in practice.

Enjoy reading,

Dr Annette Doll-Sellen

Director of KoWi

Interview

## Interview: Cultivating lung research for participation in FP7

**Questions for Professor Werner Seeger, Chief of the Department of Internal Medicine, University Hospital of Giessen and Marburg**
**Chairman of the University of Giessen Lung Center (UGLC)**



Professor Werner Seeger

*How important was national and European funding in the establishment of the University of Giessen Lung Center (UGLC)?*

To achieve excellence in lung research we introduced the concept of translational research, in which lung experts –researchers and clinicians- work from "bench to bedside". They systematically transform basic research into clinical applications. This concept has been funded by third-party funds from the DFG collaborative research centre 547, 'Cardiopulmonary Vasculature' and clinical research groups. Our efforts were internationally acknowledged, and we received an enormous boost, at the start of 2006 through the EU FP6 research project PULMOTENSION. Over the next four years, Giessen will coordinate 31 partner institutions from 12 European countries who are collaborating on pulmonary hypertension research. We are also excited about our success in Germany's Excellence Initiative. The 'Cardiopulmonary Systems' excellence cluster opens even more opportunities to enhance our research focus. Following the merger of Marburg's and Giessen's university hospitals our center will be extended to UGMLC: University of Giessen and Marburg Lung Center.

*Does the training of young researchers have a strong impact on shaping the identity of the UGLC?*

Young researchers are vital for our center! Since 2002, lecturers from 12 interdisciplinary institutes have been providing the next generation of European researchers with specialised training on lung research. At present, 50 doctoral students are enrolled on our 'Molecular Biology and Medicine of the Lung' national graduate programme, which follows the Anglo-Saxon model. The DFG has funded the first German-American graduate college in biomedicine, called 'Signalling Mechanisms in Lung Physiology and Disease', since April 2004. This fosters the exchange of doctoral students with two leading institutions- Columbia University College of Physicians and Surgeons and Albert Einstein College of Medicine in New York. Intensive exchanges between all the participants with joint projects, seminars and annual retreats truly are a breeding ground for new ideas to be put into action.

*How would you consider complementing the excellence cluster together with FP7?*

Well, we are fairly excited about the first calls in FP7. There is a strong alliance between Giessen, Bad Nauheim, Frankfurt and our European partners from PULMOTENSION, which make it particularly suitable for participation. The excellence cluster would certainly benefit from a pan-European extension. Depending on the work programme, our Lung Center will submit proposals for at least two projects in the Thematic Priority 'Health'.

More information at *www.uglc.de*

Interview

## We are Actively Involved in Europe too

**Interview with Professor Ulrich Dirnagl, Charité University Hospital Berlin**



Professor Ulrich Dirnagl

*You run an International Graduate Programme, "Medical Neurosciences", that is administered at the national level. What made you apply to extend it to a graduate school in the Marie Curie programme?*

We want our work to be European. This means acquiring partners for European research collaboration and doctoral students from Europe, perhaps establishing a European doctoral degree and – because we are a founder member of the European Neuroscience Schools network – exploiting European potential.

As well as the financial benefits and structured training, being international is attractive: it is possible for doctoral students to work in several leading labs and to find a postdoctoral placement. Unfortunately however, there is a real lack of financial resources for coordination and management.

With CORTEX, we also have a European commitment to strengthening our local training capacity. This Early Stage Training represents another building block for the training of young Berlin researchers

in neuroscience. There is the traditional path of becoming a doctoral student in a research group, the dedicated study of medical neurosciences, various research training groups, and – thanks to Germany's Excellence Initiative – the "Mind and Brain" graduate school. Structured training strengthens not only your institution, enabling you to attract excellent young researchers, but also benefits applications for DFG "Collaborative Research Centres" and EU collaborative projects. Furthermore, the Marie Curie programme boosts our reputation both within and outside your university.

*To what extent did national schemes help you to go European?*

KoWi has provided us with in-depth advice in selecting suitable calls and has helped us to prepare our applications. It also supported us, sometimes through workshops, in modifying our strategy and in the implementation of the actual project.

**The path to a PhD:**
**Solitary confinement or structured training?**

*Has the move towards Europe improved training for young researchers?*

The important thing is for young scientists to become successful researchers. There are two schools of thought here. One says you lock yourself way for around four years with a prominent researcher, always keeping an eye on getting a paper in Nature. If this paper becomes the "next big thing", that certainly wouldn't do any harm either. The other extreme is structured PhD training. That means a lot of mentors, presenting projects, obligatory stints in partner labs, intensive soft-skills training and a structured education within your field, controlled and regulated using curricula and credit points. European Early Stage Training like CORTEX tends towards the second extreme. It's about building up a highly motivated group of mobile PhD students with good scientific knowledge and fluency in at least two languages. Each can hold his or her own internationally when it comes to competing with prominent scientists. If they are doing good science as well, success rates should be higher after training than after "solitary confinement". However, this will only become apparent when PhD students become project leaders. Early Stage Training is well-funded enough to allow top researchers to give our students both excellent neuroscience training and to equip them with soft skills. What matters is that we as Principal Investigators are committed to teaming up with young researchers. The outcome is a win-win situation for supervisors, students and the EU as a funding body.

*How will you make use of FP7?*

Firstly, we have to ensure that CORTEX is a success. We will of course enter the race again, either by extending CORTEX if it proves successful, or by starting something completely new, building on our experience with CORTEX.

| | DFG Research Training Group | EU Early Stage Training |
|---|---|---|
| Funding period | Max. 9 years<br>Can be extended once<br>Six-month funding phase-out period | Max. 4 years<br>No extension |
| Funding for PhD students (eventually also for postdocs) | 1 year qualifying stipend<br>1-2 years optional extension<br>Max. 1 year medical stipend | In Berlin, 3 years of doctoral stipend<br>Alternative duration possible<br>No postdocs |
| Partner institutions involved | Local institutes<br>Here, research groups from Berlin | Research groups from several European sites |
| Proportion of German/international young researchers | Example: Berlin RTG:<br>"Impact of Inflammation on CNS function":<br>9 internationals and 6 Germans | One German and 13 fellows of other nationalities |
| Recruitment methods | Ads in Nature, Nature NS, Die Zeit, website, research group bulletins | Ads in Nature, Nature NS, naturejobs.com, our website: www.expneuro.de |

Interview

# Successful Schemes with Good Career Prospects

**Questions for Sean McCrea, Junior Professor in Social Psychology and Motivation at University of Konstanz**



Dr. Sean McCrea

*As an American researcher, what made you come to Germany?*

The Department of Psychology at the University of Konstanz is internationally renowned for its outstanding research. I was excited about the possibility of working with these scientists and carrying out independent research as a junior professor. Funding from the German federal government enabled me to equip two modern laboratories. If I had not received this independent status and initial set-up, Germany would not have come into the equation, and I would have remained an assistant professor in the US. The fact that 14 per cent of junior professors come from outside Germany says a lot how attractive this scheme is.

*What are your perspectives for a career either in Germany or elsewhere in Europe?*

Well, being a junior professor, I'm very much at home working at Konstanz, and see good prospects for my scientific career. With regard to the mid-term evaluation of scheme, all "first generation" junior professors at Konstanz received favourable appraisals and have had their contracts extended. We feel that the junior professor scheme and the tenure-track procedure are successful models.

*How much German and international funding have you received to date?*

In October 2005, I received funding of 75,000 euros through a two-year DFG project. I also collaborate with researchers in the UK, Israel and the US, who are funded by the relevant research councils in their country. My PhD student has been granted a stipend from the Studienstiftung des Deutschen Volkes, and she undertook a research stay at New York University courtesy of the DAAD (German Academic Exchange Service). The University of Konstanz also has an internal research funding competition, in which I've received 13,000 euros.

*In what way does Germany's junior professor scheme represent a good starting point for applying for ERC starting grants?*

Young researchers often leave Europe because the opportunities for independent work here are almost non-existent. The ERC starting grants and the junior professor scheme aim to attract or retain the most highly qualified research to Europe and Germany respectively. I am sure that junior professors will also be successful in acquiring ERC starting grants. The proportion of proposals by junior professors that receive funding from the DFG is 54.2 per cent, 6.5 per cent higher than the proportion for all proposals. For example, junior professors at Konstanz have been funded by a range of international and German institutes such as NATO, the Volkswagen Foundation or the Alexander von Humboldt Foundation. Nearly half of all junior professors in Konstanz have received project funding from the DFG.

Science

# ERC Work Programme

**Starting Grants**

The first call for starting grants is expected to be made at the end of 2006 (budget of around €300 million). A call for advanced grants will be made later. Annual calls for proposals will be made in both funding streams.

Starting grants will support the establishment of independent national or transnational junior research groups, which - so long as the research team is based in Europe - can include scientists from third countries. The grants will cover 100 per cent of direct project costs, with up to 20 per cent of direct costs eligible for indirect costs. Grants are worth from €100,000 up to €400,000 a year and funding is available for up to five years. In accordance with his or her host institution, the Principal Investigator must first submit an eight-page proposal, describing the researcher's qualifications, the scientific surroundings, and the resources needed. The subsequent 16-page full proposal must contain an approval by the host institution where the researcher will be based.

***Excellence***
will be assessed using the following criteria:

1. Principal Investigator: Potential to become a world-class researcher
2. Quality of the proposed research project
3. Research Environment

The budget of the ERC will be allocated to the natural sciences and engineering, life sciences as well as to social sciences and the humanities. A ranking list for each area will be drawn up on the basis of the evaluation of proposals.

Imprint

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